

Health of Home and School.

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The Eyes and Their Care.

No words need be wasted to convince anybody what a calamity blindness is; but there is a long list of misfortunes and handicaps which may be the result of eye-strain due to defective conditions of the eyes, which may be remedied; or to the use of the eyes under wrong conditions: Severe headaches frequently recurring and extending over many years; epilepsy; chorea, neuralgia, dizziness and various other nervous troubles; mental backwardness of children; lateral curvature of the spine, due to faulty positions which improper lighting or defective eyes cause pupils to assume; etc.

Faulty Conditions of the Eyes.

The diseased or abnormal conditions of the eyes which are found in the schools most frequently are:

Near sight (myopia). This is due to a bulging out of the posterior part of the globe of the eye. With improper use, this trouble is likely to be progressive and this giving-way of the tissues of the eye at this point may give rise to various dangerous changes in the eye which may seriously affect its usefulness or may even cause blindness. The near-sighted eye is always a diseased eye.

Far sight (hypermetropia) is due to a condition just the reverse of that in myopia. The antero-posterior diameter of the eye is too short. In other words the eye is too flattened.

In some eyes there is an irregularity of the curvature of their refracting surfaces. For instance, the curvature in the perpendicular plane may be greater than that in the horizontal plane. This is astigmatism.

Eyes in which these troubles occur are always, in reading or other work, under a disadvantage and a strain when these conditions are not corrected with suitable glasses. For instance, with astigmatism there are two points on each retina at which the rays of light come to an imperfect focus, and the unaided eye is vainly trying to merge them into one.

Aside from these faulty refractive conditions there are sometimes abnormal conditions of the muscles inside or outside the eye, whose use is to focus the eye and to regulate its visual axis. This unbalanced condition of the muscles, results in convergence or divergence of the eyes, or one may rise above the other.

Schoolroom tests may detect many of these abnormal conditions of the eye, and if found or suspected the pupils should be examined by a physician who is a trained eye specialist and who can judge of the interrelation between the eyes and diseases or disturbances in other parts of the body, as well as being able merely to fit glasses.

Effect of School Work Upon the Eyes.

School work, under unfavorable conditions, has a strong tendency to bring on diseased conditions of the eyes. The unfavorable conditions may be due to faults of the eyes which should be corrected by glasses, or to

wrong methods of lighting schoolrooms. Referring to one disease of the eye only, it is found that the percentage of pupils troubled with myopia increases with the number of years in school; and the grade of the myopia also increases with the grade of the school. That is, it increases from class to class. For instance, in France there was very little myopia in the lowest classes, 17 per cent. in the intermediate, and 46 per cent. in the most advanced classes. In some of the colleges it was much worse. The same serious condition has been found in the schools in other European countries and in this country.

It is found also that defective conditions of the eyes come on more rapidly in schoolrooms which are improperly lighted.

Right and Wrong Schoolroom Conditions.

In the schoolroom the eye is the organ which is the most severely taxed. The eye should therefore have the best possible conditions arranged for its work.

The principal light in the schoolroom should come from the pupils' left. The very best lighting is when the light all comes from the left, provided the schoolhouse can be so placed that the light comes from desirable points of the compass. The next best is with the principal light from the left with a smaller glass area at the rear.

Light from the right of the pupil is bad for the reason that the pupil's hand, in writing, throws a shadow upon his work. Light from right and left gives troublesome cross-lights which are trying to the eyes. Light in front of the pupils is absolutely bad and should never be tolerated. The windows at the left which supply the principal light should be massed with the narrowest possible spaces between them.

Direct sunshine should not fall upon or near the pupils' desks, nor come into the schoolroom during school hours. The best light comes from the east, north-east, north, or north-west. Light from the southern windows should be moderated carefully by curtains during school hours when the sun is shining.

To ensure sufficient light, the glass surface of the windows should equal one-fifth, and still better one-fourth, that of the floor surface. (Figure it out for your own schoolroom.)

Blackboards between windows or near them are bad for the eyes. Eyes are strained when the student is forced into improper attitudes by desks and seats not properly fitted to him.

Various Suggestions.

If the eyes of an infant, four weeks old or less, become inflamed, report the case at once to a physician. There is a stiff penalty for not doing so, and well there may be, for one-third of all cases of blindness are caused by the want of prompt action in these infantile cases.

A person with inflamed eyes should have wash bowls and towels of his own, and otherwise should be extremely careful not to let other persons catch his trouble. Many inflammations of the eyes, particularly purulent inflammations, are very contagious. Never poultice an eye. There is extreme danger in doing so.

Pain in or over the eye is a danger signal which should receive prompt attention. In persons past middle life, pain and perhaps dimness of vision may mean a disease which sometimes destroys the sight very quickly, and always pretty surely if not relieved.

Gradual dimness of vision, usually without pain, may presage Bright's disease, cataract, or other serious local or general disease.